

What is claimed is:

1. A manufacturing method for a COF semiconductor device,
comprises:

5 Step (A) of applying an insulating resin composition to a surface
of an insulating tape on the surface of which a plurality of wiring
patterns is arranged;

Step (B) of pressably contacting a semiconductor element to the
wiring patterns in the condition wherein the insulating resin
composition is not yet cured;

10 Step (C) of fixing the semiconductor element to the wiring
patterns so as to be electrically connected by curing the insulating resin
composition; and

Step (D) of pre-heating the insulating tape from the rear surface
side before, during, and/or after the application of the insulating resin
15 composition.

2. The method of claim 1, wherein the semiconductor element in
the heated condition is contacted to the wiring pattern through the
application of pressure proceeding in Step (B).

3. The method of claim 1, wherein the pre-heat temperature in
20 Step (D) is set at 60°C to 150°C.

4. The method of claim 1, wherein the resin setting retardant is
mixed into the insulating resin composition.

5. A manufacturing method for a COF semiconductor device,
comprises:

25 Step (A) of applying an insulating resin composition to a surface

of an insulating tape on the surface of which a plurality of wiring patterns is arranged;

Step (B) of pressably contacting a semiconductor element to the wiring patterns in the condition wherein the insulating resin
5 composition is not yet cured; and

Step (C) of fixing the semiconductor element to the wiring patterns so as to be electrically connected by curing the insulating resin composition, wherein

the thickness of application of the insulating resin composition,
10 which is applied to the conjugation region of a semiconductor element of the insulating tape is greater in the center portion than in the outer periphery portion of the conjugation region of the semiconductor element in Step (A).

6. A manufacturing method for a COF semiconductor device,
15 comprises:

Step (A) of applying an insulating resin composition to a surface of an insulating tape on the surface of which a plurality of wiring patterns is arranged;

Step (B) of pressably contacting a semiconductor element to the
20 wiring patterns in the condition wherein the insulating resin composition is not yet cured; and

Step (C) of fixing the semiconductor element to the wiring patterns so as to be electrically connected by curing the insulating resin composition, wherein

25 the rear surface of the insulating tape is evacuated and sucked

by a vacuum suction means in Step (A).

7. A manufacturing method for a COF semiconductor device, comprises:

5 Step (A) of applying an insulating resin composition to a surface of an insulating tape on the surface of which a plurality of wiring patterns is arranged;

Step (B) of pressably contacting a semiconductor element to the wiring patterns in the condition wherein the insulating resin composition is not yet cured; and

10 Step (C) of fixing the semiconductor element to the wiring patterns so as to be electrically connected by curing the insulating resin composition, wherein

the insulating resin composition is applied in the form of ridges to the surface of the insulating tape while the resin discharging nozzle is being shifted within the conjugation region of the semiconductor element of the insulating tape wherein the resin discharging nozzle having a broad or large discharging outlet is used at the time in Step (A).

15 8. The method of claim 4, wherein a conductive particles is dispersed into the insulating resin composition.

20 9. A COF semiconductor device, comprises:

a thin insulating tape on the surface of which a plurality of wiring patterns is arranged;

a semiconductor element; and

25 an insulating resin composition containing a resin setting retardant for fixing this semiconductor element to the wiring pattern in

the condition wherein the semiconductor element is electrically connected to the wiring pattern.

10. The device of claim 9, wherein the insulating resin composition is further contain conductive particles in a dispersed condition.

5